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MAR 13 2006
USACE
SEATTLE DIST.
MAILROOM

March 7, 2006

Re: *Reconnaissance Report, Columbia River Fish Mitigation System
Flood Control Review*

Dear Colonel Lewis,

Thank you for the opportunity to comment on the proposal to review flood control in the Columbia Basin. We will offer a conservation-minded perspective.

The members, board, and staff of Idaho Rivers United believe that significant benefits for ESA-listed salmon and steelhead stocks can be achieved by modernizing flood control at certain projects, while providing flood protection. This is particularly true for Idaho's mainstem Snake River and tributaries.

Please contact us with any questions regarding the attached comments and recommendations.

Regards,

Bert Bowler
Native Fish Director

Tom Stuart
Board of Directors



MAR 13 2006
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Comments and Recommendations of Idaho Rivers United
Reconnaissance Report, Columbia River Fish Mitigation System Flood Control Review:

Introduction:

Idaho Rivers United (IRU) is a Boise-based non-profit conservation organization, focused on protecting and restoring rivers and the communities that depend on them. Our 3000-plus members, Board of Directors, and staff have long been engaged in statewide, regional, and national efforts to restore northwest salmon and steelhead, particularly the four ESA-listed Snake River species that are native to our state – sockeye, Fall chinook, Spring/summer chinook, and steelhead. We believe that water management generally, and modernized flood control (FC) specifically, can play a vital role for Snake stocks. Modernization can bring significant fish and wildlife benefits if we focus the plan properly, incorporate the creative ideas of experts in the region, and act soon.

As you may know, IRU facilitated a meeting in 2004 in the Boise offices of Idaho Senator Mike Crapo that included Greg Graham and Lonnie Mettler from the Corps, representatives of the Governor's office, the Boise office of the Bureau of Reclamation (USBR), Idaho Department of Fish and Game, and IRU. At that meeting, we discussed the need for flood control modernization and offered some detail for the Snake basin. IRU also participated in the informative Columbia River Inter-Tribal Fish Commission (CRITFC) Flood Control Workshop, with staff from Senator Crapo's office.

In recent years, some flood control operations have been modernized at certain projects, due to the compelling need to improve conditions for ESA-listed salmon and the availability of new technologies. Notably, VarQ-type operations are now in place at Hungry Horse and Libby. However, progress in this area has been limited. Changes in the Snake Basin are badly needed now, as the logical 'next step.'

The need to modernize flood control in the Snake River to benefit salmon is urgent. After an upturn in 2001, ESA-listed wild Snake salmon species are declining steeply. In particular peril are the Snake River spring migrants – sockeye, spring/summer chinook, and steelhead – which some say face extinction as early as 2018. Only six (6) sockeye returned to central Idaho in 2005. Further, climate change is now apparent in many aspects of the region's weather patterns, including warmer winter temperatures, increased rainfall, decreased snowpack, an earlier, more protracted spring runoff, and warmer summers. The need for focused, timely action to improve spring migration conditions for these Snake spring migrants has never been more compelling. A "Plan for Action" in the Snake is where our attention will be focused.

With this perspective in mind, our comments are sequenced as follows:

1. General responses to the Corps' report of January 26, 2006.
2. Specific responses and discussion.
3. Recommendations for immediate action under current FC protocols.
4. Detailed suggestions for structure and timetable for a proposed Snake "pilot project," as the first step in a larger basin-wide FC review.

1. General responses to the Corps' report of January 26, 2006:

Scientific framework:

- We urge the Corps to incorporate more fully the views and perspectives of State and Tribal fish managers on matters relating to the flow-survival relationship. Many scientists (outside and inside the Action Agencies) assert that a flow-survival correlation exists, and further, that if salmon stocks can be restored with all FCRPS dams in place, flow improvements are vital.
- In addition to a long list of publications and references already in the public record on this topic, note particularly a new book edited by Dr. Richard N. Williams entitled "Return to the River," (Elsevier Press, 2006, ISBN: 0-12-088414-3). Dr. Williams has compiled a thorough and detailed work supporting the importance of more natural conditions, including improved seasonal flows, to reverse the decline of ESA-listed stocks.

Overall recommendations:

- We applaud the Corps' interest in modernizing system flood control (FC) generally, because of the impact of climate change and other factors. We applaud it specifically, because of potential benefits badly needed for some ESA-listed salmon stocks. We are alarmed by a recent downturn in adult salmon returns – now declining steeply and accelerating for Snake River spring migrants – making improved conditions for these fish urgent.
- IRU agrees with the Corps' conclusion that there is a Federal interest in pursuing a feasibility level study. However, we disagree with the initial scope of the project as proposed. We suggest a more limited beginning, starting with a 'pilot project,' before conducting the more costly, time-consuming basin-wide FC review. This approach significantly reduces initial costs, increases the likelihood of Congressional funding, allows an adaptive management framework, provides a demonstration project to gain public confidence in FC modernization, and creates benefits quickly in the test area. In short, we believe that a limited FC pilot project is likely to succeed; whereas a full basin-wide review is more likely to remain unfunded or fail.
- IRU observes that a \$30 million project requiring seven years to implement forfeits vital benefits that are available more quickly, at much lower cost. We suggest taking the first step of a basin-wide review in a carefully limited way - an "adaptive management" FC test in the Snake River.
- Accordingly, adjustments should be made in project phases, timetables, milestones, costs, etc., to reflect starting the review with a Snake pilot project.

- Significant deficiencies in current FC operations must be corrected to achieve available salmon benefits under existing FC protocols. See section 3 below.

2. Specific Comments on Reconnaissance Report:

- Section 3.3.1 (pg. 3): It is incorrect to say that ‘...adequate river flows in the Snake Basin have been provided for the spring and summer salmon migration periods.’ Perhaps what is meant is, ‘...salmon flow objectives have been established for the spring and summer runoff periods.’ In the Snake, we note that flow objectives have rarely been achieved, even in water years with far more than 100% of normal snowpack (e.g., 1997). In 1997, despite heavy snowpack in the Snake, spring flow objectives were met only about 50% of the time. This is largely due to insufficient emphasis by Action Agencies to operate the system in a way that achieves spring salmon flows.
- Since 2000, a failure to achieve URCs on Apr 10 has contributed directly to a flow shortfall during the spring migration. See section 3 for details.
- Section 3.3.2, Opportunities (pg. 4): With the 2004 Biological Opinion now under remand following recent court decisions, we recommend deleting all discussion related to a comparison of ‘UPA’ and ‘FCRPS reference operations.’ Let it be sufficient in this section to state that the rationale for increasing seasonal flows is based in a long, substantial record of supportive scientific work, including studies by NMFS/NOAA, USFWS, State and Tribal fish managers, the NW Power and Conservation Council, and independent scientists. Many assert that the benefits of increased flows are compounded when spill is increased simultaneously, with synergistic effects. The Corps might also acknowledge wide regional support for various adaptive strategies (as FC modernization would be described), particularly where strategies can be tested to benefit salmon in key habitats.
- Section 4.1, study area (pp. 7-8): The Hells Canyon Complex (HCC) should be included in Sub-basin C, because of the combined impact of FC operations at Dworshak (DWR) and Brownlee (BRN) on salmon flows in the lower Snake River. Despite the fact that FERC oversight of Idaho Power Company’s HCC operation is not directly under the control of the Action Agencies, their relationship is too close to separate DWR and BRN in this manner. BRN flood control operations remain under Corps’ jurisdiction.
- Section 5.1.2, Systemwide Operations, under the last bullet (pg 14): In the Lower Snake River Juvenile Salmon Migration Feasibility Report/EIS, the selected alternative was the *adaptive migration* approach, “...because its implementation allowed flexibility in optimizing the mainstem seasonal flow regimes...” IRU notes that a Snake River FC pilot project, testing improved spring flows to benefit salmon, is an obvious outgrowth of this prior Corps decision. In fact, a pilot project to modernize FC and improve spring flows

might be the most significant Corps 'adaptive management' test since Snake River salmon were listed under the ESA.

- Section 6.1, Plan Formulation (pp 26-27): "...Note that there is considerable uncertainty to the exact flow-survival relationship..."

This statement is unnecessary, and potentially misleading. Fish managers agree generally that a flow-survival correlation exists, and that increased flows result in higher survival rates. With this in mind, we find compelling justification for the Corps to undertake a Snake 'pilot project,' to learn more about the flow-survival relationship and test the efficacy of flood control shifts. A test in the Snake would make project-specific FC adjustments at DWR and BRN to enhance flows, while monitoring the results. This is a win for scientists (who obtain field data on flow-survival relationships), and also for policy makers (who need to know how FC adjustments can enhance salmon returns).

- Section 6.1.1, Table 9, (pg. 30): A process to redefine flood flows and damage thresholds is unnecessary for a project limited to the Snake, just as it was unnecessary for the adoption of VarQ operations at Libby and Hungry Horse. We do not think a potentially contentious, distracting discussion of numbers would be productive at this time (200 kcfs or a different number for 'zero damage;' 450, 500, 550 kcfs for flood flows). A limited Snake River pilot project would be conducted under existing flood definitions.

The region would not benefit from a study that might delay or preclude flow improvements, when such a course would prove more detrimental to endangered salmon and move the region farther from potential solutions.

3. Recommendations for immediate actions under existing FC protocols:

- Corrective action is needed now to ensure that April 10th URCs are achieved. This is critically important to improve flows during the April 3rd- June 20th migration period. For the years 2000-2005, failures occurred repeatedly at DWR and BRN:

Dworshak	Apr 10 URC (existing FC)	Actual elevation (msl)	Elevation shortfall (ft)	Approximate shortfall
2000	1532.4	1519.4	-13.0	-173 KaF
2001	1589.1	1516.6	-72.5	-1073 KaF
2002	1528	1506.9	-21.1	-269 KaF
2003	1587.4	1576.5	-10.9	-185 KaF
2004	1554.2	1544.1	-10.1	-144 KaF
2005	1597.6	1584.2	-13.4	-241 KaF
Average 00-05*	1564.8	1541.3	-23.5	-348 KaF *

Brownlee	Apr 10 URC (existing FC)	Actual elevation (msl)	Elevation shortfall (ft)	Approximate shortfall
2000	2077	2053.1	-23.9	-304 KaF
2001	2077	2074.4	-2.6	-35 KaF
2002	2055.1	2045.7	-9.4	-104 KaF
2003	2076.6	2070	-6.6	-91 KaF
2004	2055.1	2060.4	+5.3	+64 KaF
2005	2077	2072	-5.0	-68 KaF
Average 00-05*	2069.6	2062.6	-7.0	-90 KaF *

* Since 2000, spring salmon flows for the three ESA-listed Snake stocks out-migrating in the spring period have suffered an average shortfall of 438 KaF (348 KaF from Dworshak, plus 90 KaF from Brownlee). Much greater emphasis is needed to assure that all system flood control projects reach URC elevations by April 10th, if not earlier.

- Flood Control shifts: starting immediately, shift as much FC space as possible from DWR and BRN to other projects (e.g., GCL, JDA, etc.). In the past, this shift has occurred only occasionally, to the detriment of Snake River flows.

4. Suggested revisions to structure and timetable of the proposed Review, to reflect beginning with a Snake River pilot FC project for DWR and BRN:

- Re-structure planning and implementation steps and milestones to reflect a sequential strategy, starting with a Snake pilot project for DWR and BRN only. Thus, the first step would be to undertake Phase I, II, III, and IV only in Subbasin C (amended to include the Hells Canyon Complex). Later, similar projects for remaining Columbia subbasins would be accomplished in a logical sequence, probably starting upriver and ending with Subbasin D.
- In this light, the Subbasin C 'phase' of the project would involve the following components, precisely focused as follows:
 1. Improve the use and reliability of seasonal water supply volume forecasts in the Snake Basin.
 2. Change storage regulation at Dworshak and Brownlee to manage for more storage, higher salmon flows in the lower Snake River, and flood protection per the 1991 Corps Flood Control Review.
 3. Update capabilities of existing federal levees and upgrade as needed to meet flows anticipated in the Snake.
 4. Maintain protections per guidance for a Standard Project Flood computed in CRT-93 (June 1991).
- Utilize expertise not only from the regional offices of the action agencies, but also from CRITFC, Treaty tribes, UW's Climate Impacts Group, NWS, the Boise

office of USBR, State fish managers, and other sources, to reduce costs and improve quality of flood control operations. These professionals might help assemble current data, offer new suggestions, conduct research, evaluation, and modeling of various operations. This can reduce project costs, accelerate completion, and provide timely oversight, quality control, and monitoring of all project elements.

- Specific recommendations and detail for a Snake pilot project:
 1. For Dworshak, develop new project FC rule curves with the following adjustments:
 - shift system spring flood control space to alternate projects;
 - shift Dworshak refill target date from June 30th to May 31st;
 - Canvas existing meteorological and hydrological research, to incorporate best technologies to predict water supply volumes.
 2. Using the new rule curves, operate Dworshak annually in an adaptive framework, as follows:
 - Adjust winter operations to arrive at URC on April 1 or earlier.
 - From April 1st - May 31st, refill gradually to meet May 31st 'full' target, adjusting outflows at least weekly in coordination with Hells Canyon Complex (HCC) releases, with the goal of achieving spring flow objectives at Lower Granite (LWG) as often as possible, for as long as possible, 24 hours per day.
 - Continue project 'full' from May 31st to June 21st, passing inflows to help achieve flow objectives at LWG as often as possible, for as long as possible.
 - Beginning June 21st, shape releases of summer water per FCRPS Biological Opinion and other agreements, including consultations with CRITFC, Treaty Tribes, and State fish managers.
 3. For Brownlee, develop new FC rule curves incorporating the following inputs:
 - Shift as much FC space as possible (a minimum of 110 Kaf) to other projects on the Columbia.
 - Shift refill date from June 30th to May 31st.
 - Incorporate new technologies to predict water supply volumes.
 4. Coordinating with FERC and Idaho Power Company, test alternative operations at the HCC with the goal of achieving LWG flow objectives for as many consecutive days of the Apr 3-June 21 spring migration as possible. Among several possibilities, one scenario is:
 - Adjust winter operations at BRN to arrive at URC by Mar 1st.

- Beginning April 3rd, shape BRN releases/draft as required to achieve LWG salmon flows as much as possible, for as long as possible, 24 hours per day, without compromising refill for summer operations. Readjust HCC outflow rates at least weekly to achieve LWG flows.
 - As inflows from the Salmon and Clearwater increase to achieve LWG salmon flows, decrease HCC releases, to refill BRN by June 20.
 - Beginning June 21st, shape HCC releases per Biological Opinion operations and other agreements.
5. Run the Snake 'pilot project' as above, making needed adjustments to enhance salmon flows and maintain flood protection in an adaptive management context, for a minimum of eight years (or two complete spring/summer chinook or steelhead life-cycles). Using the lessons learned, expand successful concepts and practices from the Snake River pilot project to other Columbia subbasins.
6. Timetable: construct, plan, and implement the various actions no later than the following dates:
- January 1, 2007: shift flood control space now assigned to DWR and BRN under existing FC operations (CRT-93, June 1991) to other projects.
 - January 1, 2008: Implement new rule curves and revised operations at DWR and BRN (with earlier refill and FC shifts). Apply updated water supply forecasts, as available.
 - 2009 and beyond: adjust FC shifts between DWR, BRN and other projects (GCL, JDA, etc.) as needed to refine flood protection and optimize flow benefits. Continue to incorporate new climate tools to predict water supply volumes reliably.
 - 2008 and beyond: engage regional fish managers to provide feedback on Snake River operations, monitor and evaluate the response of ESA-listed Snake salmon stocks, and refine operations in an adaptive-management context.
 - Extend lessons learned in the Snake pilot project to other areas of the Columbia basin as soon as possible.

Idaho Rivers United staff and board members are available to consult further in the development of these concepts, and to assist in any way possible to obtain necessary support and funding for a Snake Basin pilot project. This would be a significant first step in a region-wide flood control review.

Thank you for your consideration.